

Solid-state Timer H3CT

DIN 48 x 48-mm Standard Size Analog Timer

- Wide time range (for 4 series of models); 0.1 s to 30 hrs.
- With H3CT-8H models, the output type can be switched between time limit DPDT and time limit SPDT + instantaneous SPDT using a selection switch.
- High setting accuracy.



Model Number Structure

Model Number Legend

H3CT-8□
1

1. Output Type

- A: Time-limit SPDT
- H: Time-limit SPDT and switchable SPDT (time limit ↔ instantaneous)

Ordering Information

List of Models

Rated supply voltage	Instantaneous contact	Time-limit contact	Time ranges			
			B Series 0.1 s to 10 min	C Series 0.3 s to 30 min	D Series 0.1 min to 10 hrs	E Series 0.3 min to 30 hrs
100 to 120 VAC, 200 to 240 VAC, 12 VDC, 24 VDC	SPDT	SPDT	H3CT-8H			
	---	DPDT				
	---	SPDT	H3CT-8A			

Note: Specify both the supply voltage and time range code in addition to the model number when ordering.

Example: H3CT-8H 100 to 120 VAC B

└─── Time range code

└─── Supply voltage

Accessories (Order Separately)

Track Mounting Socket	P2CF-08
Back Connecting Socket	P3G-08, PL-08
Flush Mounting Adapter	Y92F-30

Specifications

■ General

Item	H3CT-8A	H3CT-8H
Operating mode	ON-delay	
Pin type	8 pin	
Operating/Reset method	Time-limit operation/Self-reset	
Output type	SPDT (time limit)	SPDT (time limit) and switchable SPDT (time limit ↔ instantaneous)
Mounting method	DIN track and surface mounting; Flush mounting with Y92F-30 Adapter (not provided)	

■ Time Ranges

Series	DIP switch setting		Time setting range	Maximum setting time
	Multiple rated time	Time unit		
B	x 1	sec	0.1 to 1 s	1 s
	x 10	sec	1 to 10 s	10 s
	x 1	min	0.1 to 1 min	1 min
	x 10	min	1 to 10 min	10 min
C	x 3	sec	0.3 to 3 s	3 s
	x 30	sec	3 to 30 s	30 s
	x 3	min	0.3 to 3 min	3 min
	x 30	min	3 to 30 min	30 min
D	x 1	min	0.1 to 1 min	1 min
	x 10	min	1 to 10 min	10 min
	x 1	hrs	0.1 to 1 hrs	1 hr
	x 10	hrs	1 to 10 hrs	10 hrs
E	x 3	min	0.3 to 3 min	3 min
	x 30	min	3 to 30 min	30 min
	x 3	hrs	0.3 to 3 hrs	3 hrs
	x 30	hrs	3 to 30 hrs	30 hrs

■ Ratings

Rated supply voltage	200 to 240 VAC (50/60 Hz)	100 to 120 VAC (50/60 Hz)	24 VDC	12 VDC
Operating voltage range	85% to 110% of rated supply voltage			90% to 110% of rated supply voltage
Power consumption	8.6 VA	5.8 VA	0.82 W	0.6 W
Control outputs	5 A at 250 VAC, resistive load ($\cos\phi = 1$)			

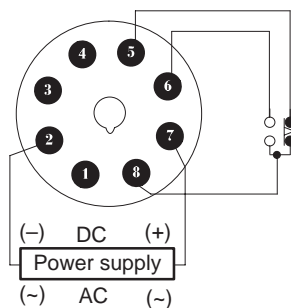
■ Characteristics

Accuracy of operating time	±1% FS max. (±10 ms FS in ranges of 0.5 and 1 s)
Setting error	±5% ±0.05 s max.
Influence of voltage	±1% (±10 ms FS in range of 0.5 and 1 s)
Influence of temperature	±2% (±10 ms FS in range of 0.5 and 1 s)
Insulation resistance	100 MΩ
Dielectric strength	2,000 VAC (between current-carrying metal parts and exposed non-current-carrying metal parts) 2,000 VAC (between control output terminals and operating circuit) 1,000 VAC (between contacts not located next to each other)
Vibration resistance	Destruction: 0.75-mm single amplitude each in three directions Malfunction: 0.5-mm single amplitude each in three directions
Ambient temperature	Operating: -10°C to 55°C (with no icing)
Ambient humidity	Operating: 35% to 85%
Life expectancy	Mechanical: 10,000,000 operations min. (at 1,800 operations/h) Electrical: 100,000 operations min. (5 A at 250 VAC, $\cos\phi = 1$, at 1,800 operations/h)

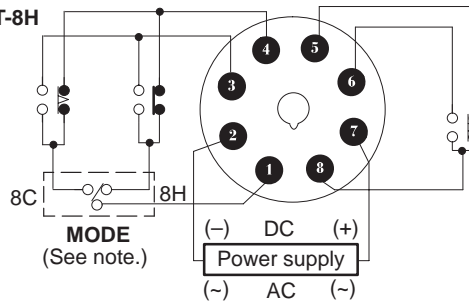
Connections

Terminal Arrangement

H3CT-8A



H3CT-8H

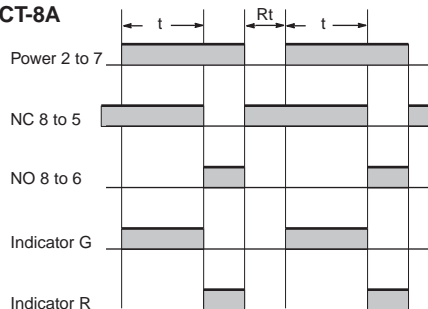


Note: The output contact can be set to either instantaneous or time limit contact using the switch located at the upper right corner of the front panel.

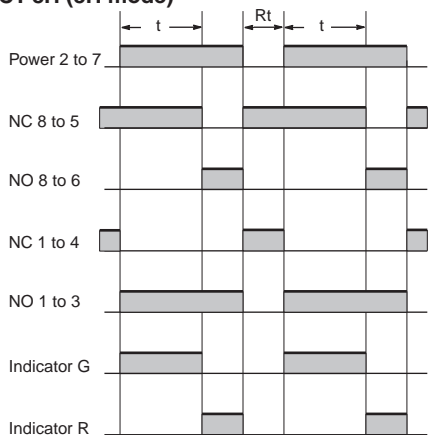
Timing Charts

Note: 1. The minimum power-operating time, "Rt," is 0.1 s.
2. The "t" in the timing charts stands for the set time.

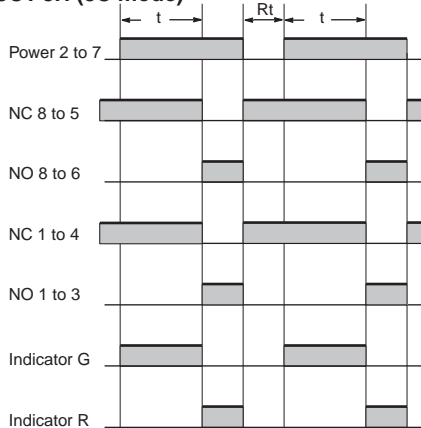
H3CT-8A



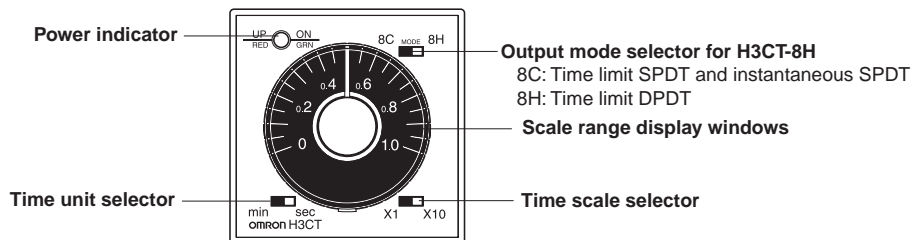
H3CT-8H (8H mode)



H3CT-8H (8C mode)



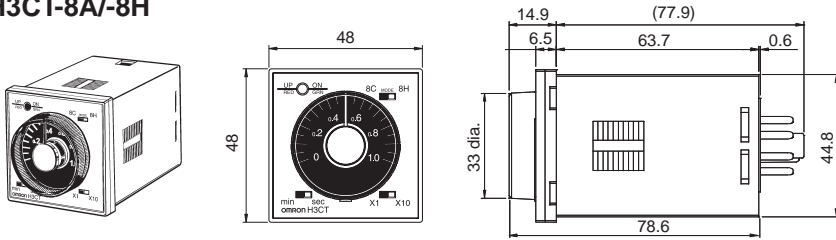
Nomenclature



Dimensions

Note: All units are in millimeters unless otherwise indicated.

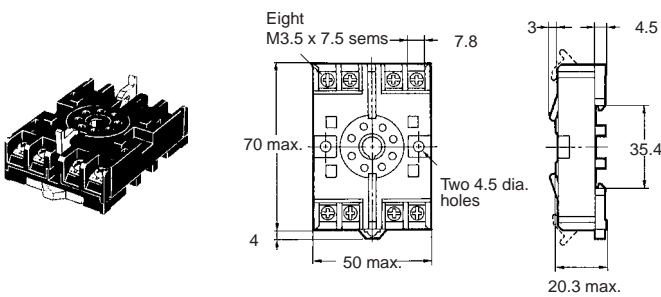
H3CT-8A/-8H



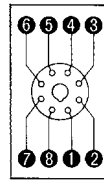
■ Accessories (Order Separately)

Track Mounting Socket

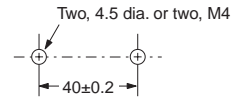
P2CF-08



Terminal Arrangement/
Internal Connections
(Top View)

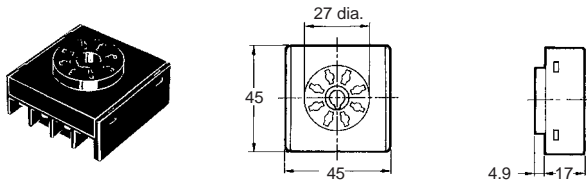


Surface Mounting Holes

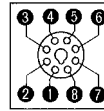


Back Connecting Socket

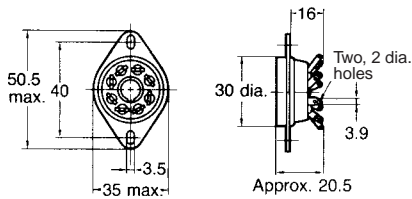
P3G-08



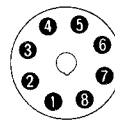
Terminal Arrangement/
Internal Connections
(Bottom View)



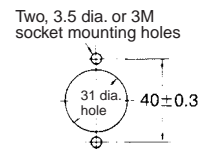
PL08



Terminal Arrangement
(Bottom View)



Mounting Holes



Precautions

Power Supplies

The power supply circuit of the H3CT uses the capacitor drop method. This circuit should be used with a commercial sine-wave frequency. The internal circuit may be damaged if a power supply with higher frequency (i.e., inverter power supply) is used.

Environment

When using the Timer in an area with excess electronic noise, separate the Timer, wiring, and the equipment which generates the input signals as far as possible from the noise sources. It is also recommended to shield the input signal wiring to prevent electronic interference.

Organic solvents (such as paint thinner), as well as very acidic or basic solutions can damage the outer casing of the Timer.

Others

If the Timer is mounted on a control board, dismantle the timer from the control board or short-circuit the circuitry of the power board before carrying out a voltage withstand test between the electric circuitry and non current-carrying metal part of the Timer, in order to prevent the internal circuitry of the Timer from damage.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. L088-E1-02 **In the interest of product improvement, specifications are subject to change without notice.**

OMRON Corporation

Industrial Automation Company

Industrial Control Components Division

Shiokoji Horikawa, Shimogyo-ku,

Kyoto, 600-8530 Japan

Tel: (81)75-344-7119/Fax: (81)75-344-7149

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AUDIN - 8, avenue de la malle - 51370 Saint Brice Courcelles - Tel : 03.26.04.20.21 - Fax : 03.26.04.28.20 - Web : <http://www.audin.fr> - Email : info@audin.fr